AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) An image output control system comprising an image processing device that makes image data subjected to a preset series of image processing and an image output device that creates dots according to a result of the preset series of image processing to output an image,

said image processing device comprising:

a pixel group setting module that collects a predetermined number of plural pixels, among a large number of pixels constituting the image, to each pixel group;

a dot number specification module that causes image data of respective pixels in each pixel group to be represented uniformly by preset representative image data and specifies number of dots to be created in each pixel group according to the representative image data; and

a number data output module that outputs dot number data representing the specified number of dots with regard to each pixel group to said image output device,

said image output device comprising:

a number data receiving module that receives the output dot number data with regard to each pixel group;

a priority order specification module that specifies a priority order of pixels for dot formation in each pixel group;

a pixel position determination module that determines position of each dot-on pixel included in each pixel group, based on the received dot number data and the specified priority order; and

a dot formation module that actually creates a dot at the determined position of each dot-on pixel;

wherein said dot number specification module comprises:

a mapping storage module that stores multiple threshold value sequences, each consisting of plural threshold values corresponding to the predetermined number of plural pixels included in each pixel group, as multiple mappings for conversion of the representative image data of each pixel group into the number of dots to be created in the pixel group; and

a mapping selection module that selects one threshold value sequence among the stored multiple threshold value sequences as one mapping for each pixel group among the stored multiple mappings;

said dot number specification module specifying a number of smaller threshold values in the selected threshold value sequence that are smaller than the image data of each pixel group, as the number of dots to be created in each pixel group, based on the representative image data of the pixel group and the selected mapping;

said mapping storage module storing the plural threshold values of each threshold value sequence together with information on an order of magnitude of the respective threshold values in the threshold value sequence; and

said dot number specification module referring to the order of magnitude and comparing the image data of each pixel group with the plural threshold values of the selected threshold value sequence, so as to specify the number of dots to be created in the pixel group.

2. (original) An image output control system in accordance with claim 1, wherein said image processing device further comprises:

a pixel number increase module that processes each original pixel of the image to generate multiple pixels having identical image data with image data of the original pixel, so as to increase a total number of pixels in the image,

wherein said pixel group setting module collects the multiple pixels generated from an identical original pixel to one pixel group.

3. (original) An image output control system in accordance with claim 1, wherein said priority order specification module selects one priority order for each pixel group, among multiple priority orders prepared in advance.

4. (cancelled)

5. (cancelled)

6. (cancelled)

7. (currently amended) An image output control system in accordance with claim ~~6~~1, wherein said mapping storage module stores the plural threshold values of each threshold value sequence arranged in the order of magnitude as storage of the information on the order of magnitude.

8. (currently amended) An image output control system in accordance with either one of claims ~~6~~ 1 and 7, wherein when the image data of one pixel group is greater than a preset first threshold value, said dot number specification module performs comparison with the image data of the pixel group in a descending order of the plural threshold values of the selected threshold value sequence, so as to specify the number of dots to be created in the pixel group.

9. (currently amended) An image output control system in accordance with either one of claims ~~6~~ 1 and 7, wherein when the image data of one pixel group is smaller than a preset second threshold value, said dot number specification module performs comparison with the image data of the pixel group in an ascending order of the plural threshold values of the selected threshold value sequence, so as to specify the number of dots to be created in the pixel group.

10. (currently amended) An image output control system in accordance with claim ~~6~~1, wherein said dot number specification module start comparison between the image data of each pixel group and the plural threshold values of the selected threshold value sequence from a threshold value having a selected

ordinal number corresponding to a most recently specified dot number, so as to specify the number of dots to be created in the pixel group.

11. (currently amended) An image output control system in accordance with claim ~~5~~1, wherein said mapping storage module stores a simplified dither matrix that includes the multiple threshold value sequences arranged in a preset two-dimensional array, as the multiple mappings,

said mapping selection module selects one threshold value sequence corresponding to a position of each pixel group in the image, among the multiple threshold value sequences stored in the simplified dither matrix, and

said dot number specification module specifies the number of dots to be created in each pixel group, based on comparison between the image data of the plural pixels included in the pixel group and the corresponding plural threshold values of the selected threshold value sequence.

12. (original) An image output control system in accordance with claim 11, wherein said priority order specification module comprises:

a priority order storage module that stores a priority order matrix including the multiple priority orders of pixels for dot formation in each pixel group in a preset two-dimensional array, and

the simplified dither matrix and the priority order matrix have an identical number of rows and an identical number of columns expressed by the number of pixels.

13. (original) An image output control system in accordance with claim 11, wherein said mapping storage module stores the simplified dither matrix that is generated by dividing a dither matrix, which maps threshold values to respective pixels arranged in a two-dimensional array, into multiple groups corresponding to multiple pixel groups and includes the multiple threshold value sequences arranged corresponding to the multiple groups, and

said priority order specification module comprises:

a priority order storage module that stores a priority order matrix that is generated by dividing the dither matrix into the multiple groups corresponding to the multiple pixel groups and includes the multiple priority orders arranged corresponding to the multiple groups, where the priority order is specified with regard to each pixel group based on a magnitude order of respective threshold values included in a corresponding group; and

a priority order selection module that selects one priority order corresponding to a position of each pixel group in the image, among the multiple priority orders stored in the priority order matrix.

14. (cancelled)

15. (currently amended) An image processing device that causes input image data representing an image to go through a preset series of image processing and thereby generates control data, which is used for control of dot formation by an image output device that creates dots and outputs a resulting processed image, said image processing device comprising:

a pixel group setting module that collects a predetermined number of plural pixels, among a large number of pixels constituting the image, to each pixel group;

a dot number specification module that causes image data of respective pixels in each pixel group to be represented uniformly by preset representative image data and specifies number of dots to be created in each pixel group according to the representative image data; and

a number data output module that outputs dot number data representing the specified number of dots with regard to each pixel group as the control data to said image output device;

wherein said dot number specification module comprises:

a mapping storage module that stores multiple threshold value sequences, each consisting of plural threshold values corresponding to the predetermined number of plural pixels included in each pixel group, as multiple

mappings for conversion of the representative image data of each pixel group into the number of dots to be created in the pixel group; and

a mapping selection module that selects one threshold value sequence among the stored multiple threshold value sequences as one mapping for each pixel group among the stored multiple mappings;

said dot number specification module specifying a number of smaller threshold values in the selected threshold value sequence that are smaller than the image data of each pixel group, as the number of dots to be created in each pixel group, based on the representative image data of the pixel group and the selected mapping;

said mapping storage module storing the plural threshold values of each threshold value sequence together with information on an order of magnitude of the respective threshold values in the threshold value sequence; and

said dot number specification module referring to the order of magnitude and comparing the image data of each pixel group with the plural threshold values of the selected threshold value sequence, so as to specify the number of dots to be created in the pixel group.

16. (original) An image processing device in accordance with claim 15, said image processing device further comprising:

a pixel number increase module that processes each original pixel of the image to generate multiple pixels having identical image data with image data of the original pixel, so as to increase a total number of pixels in the image,

wherein said pixel group setting module collects the multiple pixels generated from an identical original pixel to one pixel group.

17. (original) An image processing device in accordance with claim 15, wherein said dot number specification module comprises:

a mapping storage module that stores multiple mappings for conversion of the representative image data of each pixel group into the number of dots to be created in the pixel group; and

a mapping selection module that selects one mapping for each pixel group among the stored multiple mappings,

said dot number specification module specifying the number of dots to be created in each pixel group, based on the representative image data of the pixel group and the selected mapping.

18. (currently amended) An image output control method that makes image data subjected to a preset series of image processing and creates dots according to a result of the preset series of image processing to output an image,

said image output control method comprising:

a first step of collecting a predetermined number of plural pixels, among a large number of pixels constituting the image, to each pixel group;

a second step of causing image data of respective pixels in each pixel group to be represented uniformly by preset representative image data and specifying number of dots to be created in each pixel group according to the representative image data;

a third step of specifying a priority order of pixels for dot formation in each pixel group;

a fourth step of determining position of each dot-on pixel included in each pixel group, based on the specified number of dots and the specified priority order; and

a fifth step of actually creating a dot at the determined position of each dot-on pixel;

wherein said second step comprises:

a mapping storage step of storing multiple threshold value sequences, each consisting of plural threshold values corresponding to the predetermined number of plural pixels included in each pixel group, as multiple mappings for conversion of the representative image data of each pixel group into the number of dots to be created in the pixel group; and

a mapping selection step of selecting one threshold value sequence among the stored multiple threshold value sequences as one mapping for each pixel group among the stored multiple mappings;

said second step specifying a number of smaller threshold values in the selected threshold value sequence that are smaller than the image data of each pixel group, as the number of dots to be created in each pixel group, based on the representative image data of the pixel group and the selected mapping;

said mapping storage step storing the plural threshold values of each threshold value sequence together with information on an order of magnitude of the respective threshold values in the threshold value sequence; and

said second step referring to the order of magnitude and comparing the image data of each pixel group with the plural threshold values of the selected threshold value sequence, so as to specify the number of dots to be created in the pixel group.

19. (original) An image output control method in accordance with claim 18, wherein said first step comprises the step of:

processing each original pixel of the image to generate multiple pixels having identical image data with image data of the original pixel, so as to increase a total number of pixels in the image.

20. (cancelled)

21. (cancelled)

22. (cancelled)

23. (currently amended) ~~An~~ A tangible computer-readable medium storing an image output control program that is executed by a computer to make image data subjected to a preset series of image processing, create dots according to a result of the preset series of image processing, and thereby output an image,

said image output control program causing the computer to ~~attain~~execute:

a first function of collecting a predetermined number of plural pixels, among a large number of pixels constituting the image, to each pixel group;

a second function of causing image data of respective pixels in each pixel group to be represented uniformly by preset representative image data and specifying number of dots to be created in each pixel group according to the representative image data;

a third function of specifying a priority order of pixels for dot formation in each pixel group;

a fourth function of determining position of each dot-on pixel included in each pixel group, based on the specified number of dots and the specified priority order; and

a fifth function of actually creating a dot at the determined position of each dot-on pixel;

wherein said second function comprises:

a mapping storage function of storing multiple threshold value sequences, each consisting of plural threshold values corresponding to the predetermined number of plural pixels included in each pixel group, as multiple mappings for conversion of the representative image data of each pixel group into the number of dots to be created in the pixel group; and

a mapping selection function of selecting one threshold value sequence among the stored multiple threshold value sequences as one mapping for each pixel group among the stored multiple mappings;

said second function specifying a number of smaller threshold values in the selected threshold value sequence that are smaller than the image data of each pixel group, as the number of dots to be created in each pixel group, based on the representative image data of the pixel group and the selected mapping;

said mapping storage function storing the plural threshold values of each threshold value sequence together with information on an order of magnitude of the respective threshold values in the threshold value sequence; and

said second function referring to the order of magnitude and comparing the image data of each pixel group with the plural threshold values of the

selected threshold value sequence, so as to specify the number of dots to be created in the pixel group.

24. (currently amended) ~~An image output control program~~A tangible computer-readable medium in accordance with claim 23, wherein said first function comprises the function of:

processing each original pixel of the image to generate multiple pixels having identical image data with image data of the original pixel, so as to increase a total number of pixels in the image.

25. (cancelled)

26. (cancelled)

27. (cancelled)

28. (currently amended) An image output control system comprising an image processing device that makes image data subjected to a preset series of image processing and an image output device that creates dots according to a result of the preset series of image processing to output an image,

said image processing device comprising:

a generator that collects a predetermined number of plural pixels, among a large number of pixels constituting the image, to each pixel group;

a number specification unit that causes image data of respective pixels in each pixel group to be represented uniformly by preset representative image data and specifies number of dots to be created in each pixel group according to the representative image data; and

a data transmitter that outputs dot number data representing the specified number of dots with regard to each pixel group to said image output device,

said image output device comprising:

a data receiver that receives the output dot number data with regard to each pixel group;

a selector that selects a priority order of pixels for dot formation in each pixel group;

an operator that determines position of each dot-on pixel included in each pixel group, based on the received dot number data and the selected priority order; and

a dot formation unit that actually creates a dot at the determined position of each dot-on pixel;

wherein said number specification unit comprises:

a memory that stores multiple threshold value sequences, each consisting of plural threshold values corresponding to the predetermined number of plural pixels included in each pixel group, as multiple mappings for conversion of the representative image data of each pixel group into the number of dots to be created in the pixel group; and

a selector that selects one threshold value sequence among the stored multiple threshold value sequences as one mapping for each pixel group among the stored multiple mappings;

said number specification unit specifying a number of smaller threshold values in the selected threshold value sequence that are smaller than the image data of each pixel group, as the number of dots to be created in each pixel group, based on the representative image data of the pixel group and the selected mapping;

said memory storing the plural threshold values of each threshold value sequence together with information on an order of magnitude of the respective threshold values in the threshold value sequence; and

said number specification unit referring to the order of magnitude and comparing the image data of each pixel group with the plural threshold values of the selected threshold value sequence, so as to specify the number of dots to be created in the pixel group.

29. (cancelled)